



B.LV5.F.GL.FC.S

Biosensor array

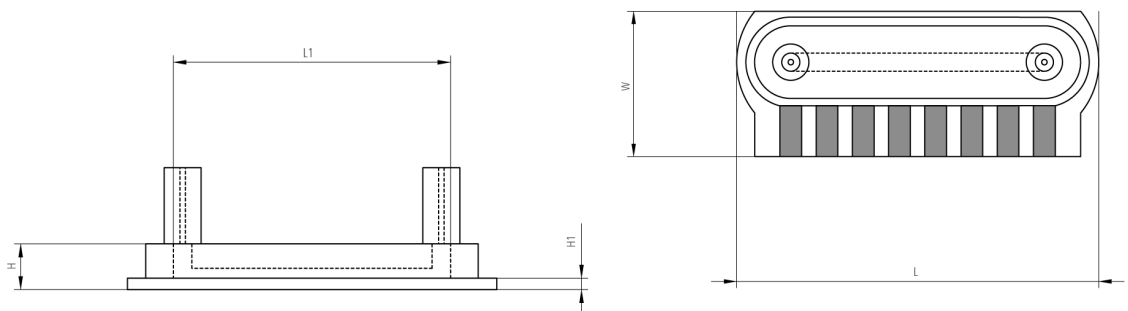
For bioanalytical applications a flow-through sensor

A product of Jobst Technologies

Benefits & Characteristics

- Enzyme-based amperometric measurement
- Excellent long-term stability
- Stable in continuous monitoring and analyzer mode
- Reference, counter and blank electrodes on-chip
- Integrated flow cell (various volumes)
- For industrial applications
- Suitable for multiparametric measurements
- Outstanding reliability
- Fast response time
- Gamma and beta sterilization compatible
- Suitable for flow-through applications

Illustration¹⁾



1) For actual size, see dimensions

Technical Data²⁾

Dimensions - chip (L x W x H in mm):	10 x 4 x 0.4 (1.23 mm with flow cell)								
Dimensions - flow cell ($V_{INTERNAL}$) ³⁾ :	0.3 μ L to 1 μ L ~ 8 mm x 600 μ m (0.15, 0.5 mm tubes)								
Fluid connection (\varnothing_{INNER}):	0.5 mm (0.15 mm available upon request)								
Working electrode:	Platinum covered with enzyme membrane								
Blank electrode:	For background compensation								
Reference electrode:	Silver / silver chloride								
Counter electrode:	Platinum								
Measurable analytes ³⁾ :	Glucose, Lactate, Glutamine ⁴⁾ , Glutamate ⁴⁾								
Operating measurement range at +25 °C (for extended measurement ranges please contact IST AG) ⁵⁾ :	<table border="0"> <tr> <td>Glucose:</td> <td>0.05 mM to 25 mM / 0.01 to 4.5 g/l</td> </tr> <tr> <td>Lactate:</td> <td>0.02 mM to 15 mM / 0.002 to 1.5 g/l</td> </tr> <tr> <td>Glutamine:</td> <td>0.04 mM to 20 mM / 0.006 to 3g/l</td> </tr> <tr> <td>Glutamate:</td> <td>0.04 mM to 10 mM / 0.006 to 1.5 g/l</td> </tr> </table>	Glucose:	0.05 mM to 25 mM / 0.01 to 4.5 g/l	Lactate:	0.02 mM to 15 mM / 0.002 to 1.5 g/l	Glutamine:	0.04 mM to 20 mM / 0.006 to 3g/l	Glutamate:	0.04 mM to 10 mM / 0.006 to 1.5 g/l
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Sterilization:

Beta or gamma sterilization is possible (25 kGy typical)
Sensitivity increases upon radiation; lactate sensors life time is reduced
Initial bioburden < 1 cfu per sensor

Time to first measurement after storage at +37 °C:	~ 15 min
Time response (t ₉₀ %) at +37 °C ⁵⁾ :	< 25 s
Temperature influence:	~ 3.5 %/°C
Storage conditions:	+4 °C to +35 °C, desiccated
Shelf life:	> 6 months (at recommended storage conditions)
Operational life time ⁶⁾ :	> 2 weeks continuous operation > 4 weeks in analyzer mode
Flow cell pressure drop:	~ 700 µl/min/bar (with a 1 µl flow cell)

2) All performance data was obtained using an acetate buffer. For more information about medium composition please contact IST AG

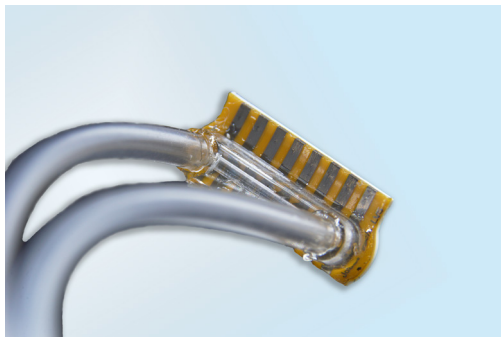
3) Larger cell volumes available upon request

4) Upon request

5) Parameters may vary depending on the medium type

6) Limited by lactate sensor; may decrease by higher analyte concentration and / or less dissolved oxygen in medium

Product Photo



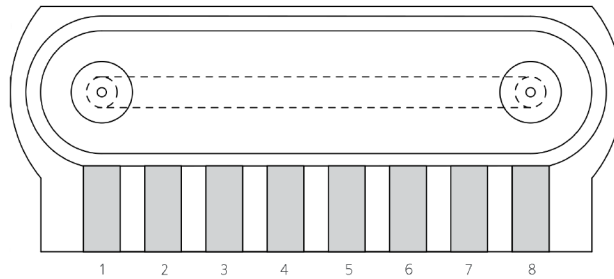
Sensor only



Packaged sensor



Pin Assignment⁷⁾

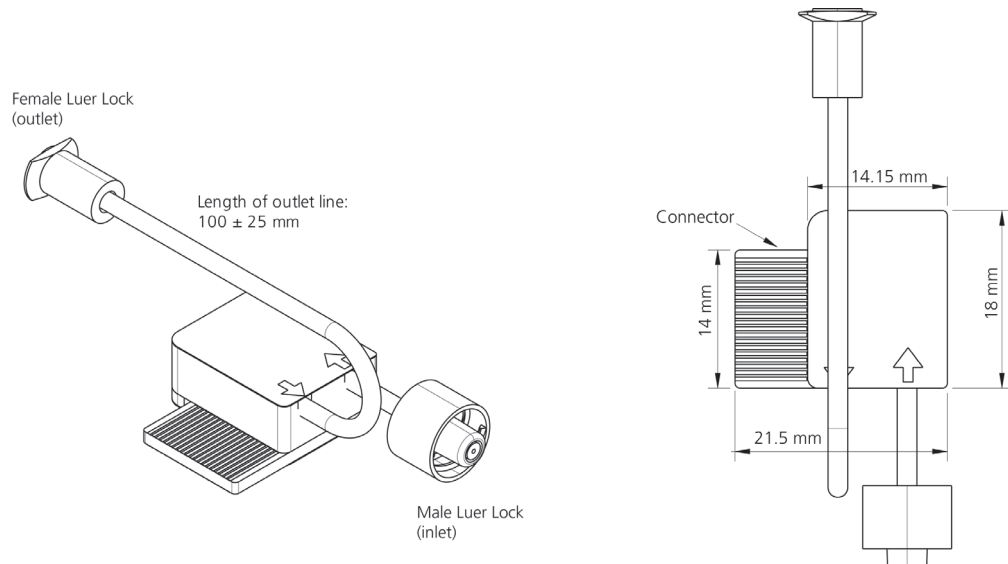


1	2	3	4
Counter	Reference	Lactate 2	Glucose 2
5	6	7	8
Blank 2	Lactate 1	Glucose 1	Blank 1

⁷⁾ Customer specific pin assignment upon request

Packaged Sensor

Innovative Sensor Technology IST AG offers a highly robust packaged version of the LV5 sensor for easy mounting and testing.



Electrical connection:

Card connector compatible with MEC6-RA connectors (40 pins in two rows, pitch: 0.635 mm)

Fluidic connection:

1 x female luer lock, 1 x male luer lock



Order Information - Sensor only

Description:	Item number:	Former main reference:
B.LV5.F.GL.FC	105117	390.00129

Order Information - Packaged Sensor

Description:	Item number:	Former main reference:
B.LV5.GL.CO10.ST.L050.ECC.R	105128	390.00154

Disclaimer

Not for medical, diagnostics and use on humans. For evaluation use only. For more information contact IST AG.

